AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-16. (Canceled)

17. (Withdrawn) An electronic component having a contact which is formed by a protruding electrically conducting core and a solder bump formed on and adhering to the core.

18. (Withdrawn) An electronic component according to claim 17, in which the core of the contact is a metal stud.

19. (Withdrawn) An electronic component according to claim 18, in which the material of the metal stud is selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

20. (Withdrawn) An electronic component according to claim 18, in which the metal stud is formed by a length of wire bonded to a contact pad of the component.

21. (Withdrawn) An electronic component according to claim 20, in which the material of the metal stud is selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

22. (Withdrawn) An electronic component according to claim 20, in which the wire is coated with a material selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

23. (Withdrawn) An electronic component according to any one of claims 17 to 22, which component is a semiconductor chip.

24. (Withdrawn) An electronic component according to any one of claims 17 to 22, which component is a substrate.

25. (Withdrawn) A electronic components package comprising a semiconductor chip and a mounting substrate, in which one of the chip and the substrate has electrical contacts formed in accordance with any one of claims 17 to 22, and the other of the chip and substrate has contact pads bonded to the contacts by the solder bumps of the contacts.

26. (Currently Amended) A method of constructing an electrical contact on a first electrical component, comprising the steps of:

on an electronic chip including an interconnection surface, the interconnection surface including a plurality of exposed contact pads and a non-wetting surface between the contact pads, fabricating on each of a portion of or all of the contact pads a protruding electrically conducting core having a solder wettable surface; and

bringing the entire interconnection surface in contact with molten solder, wherein the solder selectively wets and adheres to the cores but not to the non-wetting surface, thereby depositing solder on all of the cores to form solder bumps thereon and leaving a substantial absence of solder between cores.

27. (Previously Presented) A method according to claim 26, wherein the electrically conducting core includes a metal stud.

28. (Previously Presented) A method according to claim 27, wherein said fabricating a protruding electrically conducting core is performed by bonding a wire to a contact pad.

29. (Previously Presented) A method according to claim 28,wherein the protruding electrically conducting core is formed by a gold wire of about 25.4 μm diameter.

30. (Previously Presented) A method according to claim 27, further comprising the step of coining the metal studs after fabrication on the contact pads.

31. (Previously Presented) A method according to claim 27, further comprising the step of stacking a plurality of studs by wiring bonding.

32. (Previously Presented) A method according to claim 26, wherein the formed solder bumps have a dimension of 75 μm or less without any bridging in-between.

33. (Previously Presented) A method according to claim 26, wherein the step of bringing the entire interconnection surface in contact with molten solder is performed by dipping the interconnection surface into a bath of molten solder.

34. (Currently Amended) A method according to claim 26, wherein the step of bringing ~~brining~~ the entire interconnection surface in contact with molten solder is performed through a wave soldering process.

35. (Previously Presented) A method according to claim 26, wherein the contact pads are spaced at a pitch of about 150 μm or less.

36. (Previously Presented) A method according to claim 26, wherein the step of bringing the entire interconnection surface in contact with molten solder is performed on a plurality of electronic chips on the same wafer.

37. (Currently Amended) A method according to claim 36, further comprising the step of:

following the step of bringing ~~brining~~ the entire interconnection surface in contact with molten solder, dicing the wafer into individual chips.

38. (Previously Presented) A method according to claim 26, further comprising the step of repeating the contact of the interconnection surface with molten solder to increase the size of the solder bumps.

39. (Previously Presented) A method of electrically connecting the produced chip of claim 26 to a second electronic component, the second electronic component having corresponding solderable contacts positioned to mate with the contacts of the first electrical component, the method further comprising the steps of:

mating the first and second electronic components such that the corresponding contacts of both the first and second electronic components are brought into proximal alignment; and

applying heat to make an electrical connection between the corresponding contacts of the first and second electronic components using the solder of the solder bumps of the first electronic component.

40. (Previously Presented) A method according to claim 26, wherein the electrically conducting core is formed from a material selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

41. (Previously Presented) A method according to claim 26, wherein the electrically conducting core is coated with a material selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

42. (Currently Amended) A method of constructing electrical contacts on a wafer whereon is fabricated a number of semiconductor chips, each chip having an interconnection surface on the same side of the wafer, each interconnection surface including a plurality of exposed contact pads and a non-wetting surface between the contact pads, the method comprising the steps of:

fabricating on each of a portion of or all of the contact pads a protruding metal stud having a solder wettable surface;

simultaneously bringing the entire interconnection surface of chips of the wafer in contact with molten solder, wherein the solder selectively wets and adheres to the studs but not to the non-wetting surface, thereby depositing solder on all of the studs to form solder bumps thereon and leaving a substantial absence of solder between the studs; and

following the step of bringing the entire interconnection surface of the wafer in contact with molten solder, dicing the wafer into separate and individual chips.

43. (Currently Amended) A method according to claim 42, wherein said fabricating a protruding stud is performed by bonding a wire [[wore]] to the particular contact pad.

44. (Previously Presented) A method according to claim 43, wherein the protruding stud is formed by a gold wire of about 25.4 μm diameter.

45. (Previously Presented) A method according to claim 42, further comprising the step of coining the metal studs after fabrication on the contact pads.

46. (Previously Presented) A method according to claim 42, further comprising the step of stacking a plurality of studs by wire bonding.

47. (Previously Presented) A method according to claim 42, wherein the formed solder bumps have a dimension of 75 μm or less without any bridging in-between.

48. (Previously Presented) A method according to claim 42, wherein the step of bringing the entire interconnection surface in contact with molten solder is performed by dipping the interconnection surface into a bath of molten solder.

49. (Previously Presented) A method according to claim 42, wherein the step of bringing the entire interconnection surface in contact with molten solder is performed through a wave soldering process.

50. (Previously Presented) A method according to claim 42, wherein the contact pads are spaced at a pitch of about 150 μm or less.

51. (Previously Presented) A method according to claim 42, further comprising the step of repeating the contact of the interconnection surface with molten solder to increase the size of the solder bumps.

52. (Previously Presented) A method of electrically connecting the produced separated chip of claim 42 to a second electronic component, the second electronic component having corresponding solderable contacts positioned to mate with the contacts of the separated chip, the method further comprising the steps of:

mating the separated chip and second electronic component such that the corresponding contacts of both are brought into proximal alignment; and

applying heat to make an electrical connection between the contacts of the separated chip and second electronic component using the solder of the solder bumps of the separated chip.

53. (Previously Presented) A method according to claim 42, wherein the electrically conducting core is formed from a material selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

54. (Previously Presented) A method according to claim 42, wherein the electrically conducting core is coated with a material selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

55. (Currently Amended) A method of constructing electrical contacts on a wafer whereon is fabricated a number of semiconductor chips, each chip having an interconnection surface on the same side of the wafer, each interconnection surface including a plurality of exposed contact pads and a non-wetting surface between the contact pads, the contact pads being spaced at a pitch of about 150 μm or less, the method comprising the steps of:

fabricating on each of a portion of or all of the contact pads a protruding metal stud having a solder wettable surface by bonding a wire to the contact pads;

coining the metal studs;

simultaneously bringing ~~brining~~ the entire interconnection surface of chips of the wafer in contact with molten solder through a solder bath or wave solder process, wherein the solder selectively wets and adheres to the studs but not to the non-wetting surface, thereby depositing solder on all of the studs to form solder bumps having a dimension of 75 μm or less without any bridging in-between; and

following the step of bringing ~~brining~~ the entire interconnection surface of the wafer in contact with molten solder, dicing the wafer into separate and individual chips.

56. (Previously Presented) A method according to claim 55, wherein the protruding stud is formed by a gold wire of about 25.4 μm diameter.

57. (Previously Presented) A method according to claim 55, further comprising the step of stacking a plurality of studs by wire bonding.

58. (Previously Presented) A method according to claim 55, further comprising the step of repeating the contact of the interconnection surface with molten solder to increase the size of the solder bumps.

59. (Previously Presented) A method according to claim 55, wherein the electrically conducting core is formed from a material selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.

60. (Previously Presented) A method according to claim 55, wherein the electrically conducting core is coated with a material selected from the group consisting of gold, copper, silver, platinum, palladium and nickel and their alloys.